RESIDUE MANAGEMENT, SEASONAL

PRACTICE INTRODUCTION

USDA, Natural Resources Conservation Service - practice code 344

RESIDUE MANAGEMENT, SEASONAL - This practice is managing to leave protective amounts of crop residue on the soils surface during a prescribed time of the year, by delaying primary tillage or seedbed preparation until immediately prior to planting time.

PRACTICE INFORMATION

This practice generally applies to cropland but may also be used on other areas where field crops are grown such as wildlife or recreation lands. The practice only applies to crops that produce sufficient amounts of residue to protect the soil from erosion.

Erosion can be significantly reduced by this practice in locations where delaying seedbed preparation allows residue to be left on the soil surface during critical periods for protection from wind and water erosion. Crops grown using this tillage system are generally planted in a relatively clean seedbed.

Excessive removal of plant residue by burning, baling, or grazing often produces negative impacts on the natural resources. These activities should not be performed without evaluating the impacts.

Additional information including standards and specifications for this practice are available in the local NRCS Field Office Technical Guide.

The following pages contain the conservation effects expected to occur when this practice is applied. These effects are subjective and somewhat dependent on variables such as climate, terrain, soil, etc. Users are cautioned that these effects are estimates that may or may not apply to a specific site.

CONSERVATION PRACTICE PHYSICAL EFFECT WORKSHEET

NOTE: *recorded in Microsoft word 6.0 - use tabs to change cells/fields*

STATE	Iowa	FIELD OFFICE		DATE	12/5/96

PRACTICE: 344 Residue Management, Seasonal	NOTES:
RESOURCE: SOIL **RESOURCE CONCERN: EROSION**	**Help Message: Click on form field for choice lists. Tab key to move around. "N/A" is the default.**
RESOURCE INDICATORS	**PHYSICAL EFFECTS**
SHEET AND RILL	significant reduction in sheet and rill erosion
WIND	significant reduction in wind erosion
EPHEMERAL GULLY	slight reduction in ephemeral gully erosion
CLASSIC GULLY	insignificant
STREAMBANK	insignificant
IRRIGATION INDUCED	significant reduction in irrigation induced erosio
SOIL MASS MOVEMENT	insignificant
ROADBANK/CONSTRUCTION	N/A
OTHER	
RESOURCE CONCERN: **SOIL CONDITION**	
SOIL TILTH	moderate improvement in tilth
SOIL COMPACTION	moderate reduction in soil compaction
SOIL CONTAMINATION	
• SALTS	insignificant
• ORGANICS	insignificant
• FERTILIZERS	insignificant
• PESTICIDES	insignificant
• OTHER	
DEPOSITION/DAMAGE	
• ONSITE	moderate reduction/onsite deposition damage
• OFFSITE	moderate decrease/offsite deposition damage
DEPOSITION/SAFETY	
• ONSITE	moderately improve onsite safety/deposition
• OFFSITE	moderately improve offsite safety hazard/depos.
OTHER	
RESOURCE: **WATER** RESOURCE CONCERN: **WATER QUANTITY**	
SEEPS	insignificant
RUNOFF/FLOODING	slight decrease in runoff/flooding
EXCESS SUBSURFACE WATER	insignificant
INADEQUATE OUTLETS	slight improvement in H20 outlet concern
WATER MGT. IRRIGATION	
• SURFACE	slight improvement in irrigation efficiency
• SPRINKLER	significant improvement in irrigation efficiency
WATER MGT. NON-IRRIGATED	moderate improvement in moisture use
RESTRICTED FLOW CAPACITY (drainage)	
• ONSITE	moderate improvement in surface drainage
• OFFSITE	moderate improvement in surface drainage
RESTRICTED STORAGE	moderate reduction in sedimentation of H20 stroage
OTHER	

RESOURCE: **WATER** RESOURCE CONCERN**: WATER QUALITY**	
RESOURCE INDICATORS	**PHYSICAL EFFECTS**
GROUNDWATER CONTAMINANTS	
• PESTICIDES	insignificant
• NUTRIENTS AND ORGANICS	insignificant
• SALINITY	insignificant
• HEAVY METALS	insignificant
• PATHOGENS	insignificant
• OTHER	
SURFACE WATER CONTAMINANTS	
• PESTICIDES	slight reduction in SWater contam./pesticides
• NUTRIENTS AND ORGANICS	slight reduction in SWater contam./nutr.,organics
• SUSPENDED SEDIMENTS	moderate reduction in SWater contam./susp. sedi.
• LOW DISSOLVED OXYGEN	insignificant
• SALINITY	insignificant
• HEAVY METALS	insignificant
• WATER TEMPERATURE	N/A
• PATHOGENS	insignificant
AQUATIC HABITAT SUITABILITY	moderate inprovement in Aqua. Hab. Suit.
OTHER	
RESOURCE: **AIR** RESOURCE CONCERN: **AIR QUALITY**	
AIRBORNE SEDIMENT AND SMOKE PARTICLES	
• ONSITE SAFETY	moder. decrease in airborn sed.&smoke part./safety
• OFFSITE SAFETY	moder. decrease in airborn sed.&smoke part./safe
• ONSITE STRUCT. PROBLEMS	moder. decrease in struct.problems/dust and smoke
• OFFSITE STRUCT. PROBLEMS	slight decrease in struc. problems/dust&smoke
• ONSITE HEALTH	moder. decrease in onsite health prob./dust&smoke
• OFFSITE HEALTH	mod. improvement in offsite health
AIRBORNE SEDIMENT CAUSING CONVEYANCE PROBLEMS	insignficant
AIRBORNE CHEMICAL DRIFT	insignificant
AIRBORNE ODORS	insignificant
FUNGI, MOLDS, AND POLLEN	insignificant
OTHER	
RESOURCE CONCERN: **AIR CONDITION**	
AIR TEMPERATURE	N/A
AIR MOVEMENT (windbreak effect)	N/A
HUMIDITY	N/A
OTHER	

RESOURCE: **PLANT** RESOURCE CONCERN: **SUITABILITY**	
RESOURCE INDICATORS	**PHYSICAL EFFECTS**
SITE ADAPTATION	N/A
PLANT USE	N/A
OTHER	
RESOURCE CONCERN: **CONDITION**	
PRODUCTIVITY	slight improvement in plant cond./productivity
HEALTH, VIGOR, SURVIVAL	insignificant
OTHER	
RESOURCE CONCERN: **MANAGEMENT**	
ESTAB., GROWTH, HARVEST	slight improvement in plant estab.,growth,harvest
NUTRIENT MANAGEMENT	insignificant
PESTS	insignificant
THREAT/ENDANGERED PLANTS	insignificant
OTHER	
RESOURCE: **ANIMAL** RESOURCE CONCERN: **HABITAT**	
FOOD	slight improvement in animal habitat/food supply
COVER/SHELTER	slight improvement in animal habitat/cover,shelter
WATER (QUANTITY & QUALITY)	insignificant
OTHER	
RESOURCE CONCERN: **MANAGEMENT**	
POPULATION BALANCE	insignificant
THREAT/ENDANGERED ANIMALS	insignificant
HEALTH	insignificant
OTHER	
RESOURCE: **HUMAN** RESOURCE CONCERNS**: ECONOMIC CONSIDERATIONS**	
PLAN / COST EFFECTIVENESS	moderately cost effective
CLIENT FINANCIAL CONDITION	moderately cost effective
MARKETS FOR PRODUCTS	N/A
AVAILABLE LABOR	insignificant
AVAILABLE EQUIPMENT	insignificant

RESOURCE: **HUMAN** RESOURCE CONCERN: **SOCIAL CONSIDERATIONS**	
RESOURCE INDICATORS	**PHYSICAL EFFECTS**
PUBLIC HEALTH AND SAFETY	N/A
PRIVATE/PUBLIC VALUES	N/A
CLIENT CHARACTERISTICS	N/A
RISK TOLERANCE	N/A
TENURE	N/A
OTHER	
RESOURCE CONCERN: **CULTURAL CONSIDERATIONS**	
ABSENCE/PRESENCE OF CULTURAL RESOURCES	sign. less protection of cultural resources
SIGNIFICANCE OF CULTURAL RESOURCES	situational regarding cultural resources
MITIGATION OF NEGATIVE CULTURAL RES. IMPACTS	situational regarding cultural resources
OTHER	